

Quantum fluid-dynamic theory of gravity and space-time.

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the nowadays available equations concerning gravity, as well as the concept of space deformation induced by a mass, can describe and predict its effect but we don't know yet what gravity actually is and how it is generated and works at a quantum level.

Exhaustively understanding and quantumly describing gravity could therefore imply the unification of all fundamental forces. Moreover, if this also entailed a true understanding of what space-time is, many other still unclear issues could almost automatically be explained. I am convinced that further and substantial progress in 21st century particles, fields, quantum and space physics is absolutely linked to a full understanding of the true nature of space-time and gravity.

Abstract:

it is here assumed that space is constituted by an energetical matrix, which is absorbed by particles with mass. This absorption of space-time causes gravity. Bodies moves towards each other because they're subtracting the space between them: *i.e.* the spatiotemporal matrix (hereafter referred to as STM). Space-time and gravity would therefore need a quantum fluid-dynamic approach instead of the concept of space-time deformation suggested by the General Relativity.

This fact would explain and merge all fundamental forces and would also help us to make clear the genesis of universe, matter and to better understand dark energy, dark matter, particular behaviors of light and accelerated particles as well as to pave the way for realizing antigravity engines.

Sistematic description of the theory:

Ref.	Statement	Remarks
UGS-1	Space is constituted by an energetical matrix (STM)	Science already speculated about the fact that space doesn't seem to be mere energyless vacuum.
UGS-2	Physical bodies absorb STM and this fact causes gravity. Gravity is then an acceleration of the space-time (and of what it includes) produced by the STM absorption.	This would works according to the current equations of gravitation.

UGS-3	Because of this absorption, bodies (and therefore celestial bodies too) set in motion the STM and generate quantum currents through the space. The right approach to gravity and space-time should therefore be a quantum fluid-dynamic approach not a static, geometrical one.	Space-time static deformation is conceptually an uncorrect model to explain the interaction between bodies and space-time, although it mathematically works. Behind the correct numbers, a different (quantum) mechanism is indeed concealed. We are not able to go beyond General Relativity because it itself is the problem: its vision of gravity and space-time.
QG-1	Graviton doesn't exist	Graviton has not been identified yet.
QG-2	The quantum aspect of gravity wouldn't be satisfied by gravitons but by the spatiotemporal quanta which make up the space.	<i>Like above</i>
QG-3	Quantum of energy and origin of particles. Not the photon but the spatiotemporal quantum is the smallest quantity of energy existing in the universe and all known particles have been generated by spatiotemporal quanta aggregation during the genesis of the universe.	This would answer to the question: what was there before the Big Bang? Energy can't be created from nothing and Hawking's balancing of "positive and negative energy" refers to a later stage (the matter-antimatter annihilation) which has been furthermore asymmetric due to the B^0 meson behavior. His <i>negative gravitational energy</i> can be here replaced by a space imbued by primordial energy (the STM itself), in which the Big Bang has actually been a disturbance of its state of rest, which has triggered the formation of photons and other particles, up to matter, through a cascade effect.
GEU-1	STM absorption by particles with mass leads them repeatedly and discretely into an unstable energetical state, so that they emit quanta of electromagnetic	Gravity - electromagnetism unification explained.

	energy (photons) producing an electric field as it happens for protons and electrons. This fact represents the connection between gravity and electromagnetism . Both phenomenons are therefore due to the absorption of STM.	
GEU-2	The neutron is involved in gravity but doesn't emit an electric field: according to this theory, it should then remain unstable and decay after having absorbed a discrete quantity of STM. When it is otherwise bound in the nucleus it transfers the exceeding energy to the other nucleons. An energetic resonance among them occurs through pions and this stabilizes the nucleus.	Isolated neutrons are unstable and decay. This fact merges the weak force in this theory. In the nucleus neutrons don't decay and they stabilize it. This fact merges the strong interaction in this theory.
LAP-1	Any accelerated particle is moving through the STM. Photon is the lightest (massless) particle we know, which can freely move through the space. It is therefore subject to the lowest interaction (friction) with the STM. According to this theory, photon is then the fastest particle (after the spatiotemporal quantum, <i>i.e.</i> the space itself, when accelerated by the absorption process).	Photon is at the moment the fastest known particle.
LAP-1 bis	Any other particle can't reach the speed of light because the pressure of the STM against it is greater than against a photon and in addition, it hyperbolically increases with speed.	No particle can be accelerated till / over the speed of light.
LAP-2	When a charged particle is accelerated (through the STM) it absorbs a greater	

	amount of matrix and produces greater electromagnetic energy to compensate. At relativistic speeds this phenomenon is taken on the extreme level of synchrotron light emission	As we know, accelerated charged particles engender magnetic fields. At relativistic speeds, they emit synchrotron light.
LAP-3	Any particle / body could be indefinitely accelerated over the speed of light by avoiding the friction / pressure of the STM against it or being able to absorb or dissipate such an "overdose" of STM.	A new quantum technology could be developed in the future to overtake the speed of light.
UGS-3	If a device could absorb STM in the same direction, which Earth absorbs it in, and at the same intensity, the two forces would cancel each other out and it would then levitate and be able to move against gravity without any standard propulsion. We could call it "quantum propulsion" or "spatiotemporal propulsion".	By generating and controlling the absorption of STM, an antigravity device could be realized, taking advantage of the fact (if proven) that accelerated charged particles absorb a greater amount of STM. Simply by using electricity and superconductors and orientating the electronic flux in the useful direction (upwards), without round-trips.
DE-1	Dark energy corresponds in this theory to the STM itself. Its supposed repulsive force could actually be due to an enlargement of space caused by new production of STM. Black holes could be the culprits, since the new STM could be the "excrement" of their meal. Symmetrically speaking this would be the reverse process of what described in QG-3. Here dark energy is then the simplest form of energy, <i>i.e.</i> the STM, which has engendered all the known particles (photon included). There would actually be no real elementary particle other than ST-quantum.	

DM-1	Dark matter, in this theory, is seen as an intermediate product of spatiotemporal quanta aggregation, between dark energy and ordinary matter. It is like a very diluted kind of matter, which indeed weakly interacts at gravitational level with the known matter and acts as a framework for ordinary matter.	
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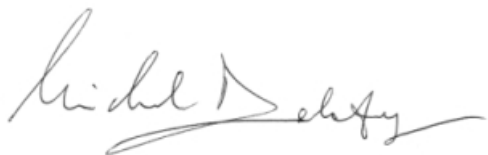
Some suggested verifications:

1) As far as the existence of the STM and the STM-particle interaction is concerned, in a vertical linac with source atop, accelerated particles should reach a slightly faster speed than in a differently set synchrotron, when the same energy is supplied. This because in the first case they would move in the same direction of the spatiotemporal flux directed towards Earth, facing this way a lower resistance.

2) A powered electromagnet should generate slightly greater gravitational pull on near matter than when it's powered off, since - due to the moving charged particles (electrons) - the absorption of STM should be greater.

3) Vertical laser beams pointing toward Earth's surface (or vice versa towards the sky) could respectively show a slight blue / red-shift. As in the previous case, this would be due to the different interaction with the current of STM moving towards the Earth's centre (Earth's gravity). But if a laser beam performs a round trip (thus cancelling out this effect) or when natural EM radiation, whose original frequency is not exactly known, reaches our instruments, this phenomenon wouldn't be noticed. We could resort to experiments involving sat-communications.

4) *other*



feedbacks and collaboration for the mathematical development of this theory to:

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video: https://youtu.be/79m2S_tfLew

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